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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,345	04/19/2001	Bjorn Claesson	024444-913	7689

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EXAMINER

GAY, JENNIFER HAWKINS

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 12/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/837,345

Applicant(s)

CLAESSION ET AL

Examiner

Jennifer H Gay

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 8-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 8-10 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 1', 12', and 12A. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161 F.2d 367, 73 USPQ 482 (CCPA 1947). The term "spigot" in claim 4 is used by the claim to mean the protrusion at the bottom of the cutting element, while the accepted meaning is "a faucet."

spig·ot

spig·ot (spig'et) *noun*

1. A faucet.
2. A wooden faucet placed in the bunghole of a cask.
3. The vent plug of a cask.¹

¹ *The American Heritage® Dictionary of the English Language, Third Edition* copyright © 1992 by Houghton Mifflin Company. Electronic version licensed from INSO Corporation; further reproduction

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 3 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Scott et al. (US 5,890,552).

Scott et al. discloses a roller cone drill bit that includes rows of cemented carbide (see Abstract) cutting elements (33, 43, and 53) are attached to the cutter. Each of the elements include a body (100) that has a working portion, an opposing mounting portion or spigot, and an intermediate portion from which the working portion and the mounting portion extend (see Figure 6). The diameter of each element is the greatest at the intermediate portion and the greatest height extends between the tip of the working portion and a transition portion between the intermediate portion and the mounting portion.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. (US 5,890,552) in view of Drake (US 4,595,067, cited by applicant).

Regarding claims 1 and 2: Scott et al. discloses a roller cone drill bit that includes the following features:

Art Unit: 3672

- A support (see Figure 1 and col. 6, lines 5-23).
- A plurality of cone cutter (21, 23, or 25) rotatably mounted by bearings (see col. 6, lines 18-21) to the support.
- Rows of cutting elements (33, 43, and 53) are attached to the cutter. Each of the elements include a body (100) that has a working portion, an opposing mounting portion, and an intermediate portion from which the working portion and the mounting portion extend (see Figure 6). The diameter of each element is the greatest at the intermediate portion and the greatest height extends between the tip of the working portion and a transition portion between the intermediate portion and the mounting portion.

Scott et al. discloses all of the limitations of the above claims except for the elements being adhered to the cutters by a metallurgical bond, i.e. welding, and except for the ratio between the height and diameter of the elements being less than 1.2.

In the abstract, Drake teaches a roller cone bit where the cutting elements are adhered to the cutter cones by welding.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have adhered the elements of Scott et al. to the cutters by welding as taught by Drake in order to have been substantially free of mechanical interconnections (see Abstract).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have formed the elements so that the ratio between the height and diameter of the elements being less than 1.2, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 5: Scott et al. discloses all of the limitations of the above claims except for the angle of the mounting portion being from 150° to less than 180°. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have

Art Unit: 3672

formed the mounting portion of Scott et al. so that its angle was from 150° to less than 180°, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 6: Scott et al. discloses all of the limitations of the above claims except for the intermediate portion having a height no greater than 15mm. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have formed the intermediate portion of the cutting element of Scott et al. so that its height was no greater than 15mm, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 7: Scott et al. discloses a roller cone drill bit that includes the following features:

- A support (see Figure 1 and col. 6, lines 5-23).
- A plurality of cone cutter (21, 23, or 25) rotatably mounted by bearings (see col. 6, lines 18-21) to the support.
- Rows of cutting elements (33, 43, and 53) are attached to the cutter. Each of the elements include a body (100) that has a working portion, an opposing mounting portion, and an intermediate portion from which the working portion and the mounting portion extend (see Figure 6). The diameter of each element is the greatest at the intermediate portion and the greatest height extends between the tip of the working portion and a transition portion between the intermediate portion and the mounting portion.

Scott et al. discloses all of the limitations of the above claims except for the elements being adhered to the cutters by a metallurgical bond, i.e. welding, and except for the ratio between the height and diameter of the elements being less than 1.2.

In the abstract, Drake teaches a roller cone bit where the cutting elements are adhered to the cutter cones by welding.

Art Unit: 3672

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have adhered the elements of Scott et al. to the cutters by welding as taught by Drake in order to have been substantially free of mechanical interconnections (see Abstract).

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have formed the elements so that the ratio between the height and diameter of the elements being less than 1.2, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The remaining references made of record disclose various drill bits that include cutting elements similar to those discussed above.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer H Gay whose telephone number is (703) 308-2881. The examiner can normally be reached on Monday-Friday, 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (703) 308-2151. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

JHG
December 6, 2002


DAVID BAGNELL
SUPERVISORY PATENT EXAMINER
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